AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method for providing service[[s]] with guaranteed Quality of Service (QoS) in ~~an~~ IP access networks, each of the IP access networks comprises an edge router connected to a backbone network, and an access network end device connected to subscribers, comprising:

a. a service entity at network service control layer obtaining ~~the addresses of~~ a calling subscriber address and a called subscriber address and QoS requirement for a service through analyzing a service request of the calling subscriber, then requesting ~~network~~ resources to IP access networks corresponding to the calling subscriber and the called subscriber, respectively;

b. ~~after receiving requests, e~~dge routers ~~of the access network~~ corresponding to the calling subscriber and the called subscriber judging whether enough resources can be provided for this service according to current resource condition, if so, executing step c, otherwise rejecting the service request of the calling subscriber; and

c. if there ~~are~~ is an upward traffic stream[[s]] sent from one of the calling subscriber and the called subscriber to the corresponding IP access network for~~of the access network in~~ this service, the corresponding edge router informing the corresponding~~an~~ access network end device of the QoS requirement for the service, and the corresponding access network end device processing the upward~~said~~ traffic

stream[[s]] according to the QoS requirement informed by the corresponding edge router;

If there ~~are~~ is a downward traffic stream[[s]] to be sent to one of the calling subscriber and the called subscriber from the corresponding IP access network for~~of the access network in~~ this service, the corresponding edge router setting priority in the corresponding IP access network for this service and forwarding ~~said~~ the downward traffic stream[[s]] to the corresponding subscriber according to the priority set by the corresponding edge router.

2. (Currently Amended) The method according to claim 1, wherein in step c, the edge router can transform service level[[s]] into ~~priorities~~ priority in the IP access network for the ~~received~~ downward traffic stream[[s]] and forward ~~said~~ the downward traffic stream[[s]] to the corresponding subscriber; or can classify the downward traffic stream[[s]] first, after identifying the downward traffic streams, transform the identified downward traffic stream[[s]] into ~~priorities~~ priority in the IP access network and forward the downward traffic stream[[s]].

3. (Currently Amended) The method according to claim 1, wherein step C is executed after ~~said~~ the edge router has informed the service entity at the network service control layer that the IP access network can provide enough resources for the service and has received confirmation from the service entity.

4. (Currently Amended) The method according to claim 1, further comprising a step of ~~said~~ the edge router obtaining at least topology structure of the IP access network and bandwidth resources of each interface of the IP access network through static configuration or dynamic management protocol.

5. (Currently Amended) The method according to claim 1, after the access network end device receives the QoS requirement [[of]] for the service from the corresponding edge router in step c, the method further comprising:

setting items of a stream classification table according to parameters for identifying the upward traffic stream[[s]] contained in the QoS requirement;

classifying the ~~received~~ upward traffic stream[[s]] sent from one of the calling subscriber and the called subscriber; and

managing bandwidth according to bandwidth parameters for the upward traffic stream[[s]] when matched with the items of the stream classification table, and processing ~~other~~ the upward traffic stream[[s]] when not matched as an upward traffic stream[[s]] without guaranteed QoS.

6. (Currently Amended) The method according to claim 5, wherein the step c comprises:

setting the downward traffic stream[[s]] with a high ~~priorities~~ priority and then forwarding the downward traffic stream[[s]] when the access network end device is an~~for~~ Ethernet ~~access~~ or IP Digital Subscriber Line Access Multiplexer (DSLAM) ~~access~~; and

sending the downward traffic stream[[s]] to Permanent Virtual Circuit (PVC) with guaranteed QoS for further forwarding when the access network end device is an~~for~~ ATM DSLAM ~~access~~.

7. (Currently Amended) The method according to claim 5, wherein [[the]] parameters for identifying the upward traffic stream[[s]] can be a four-element group, a five-element group or a seven-element group.

8. (Currently Amended) The method according to claim 1, further comprising: before receiving the QoS ~~parameters~~ requirement from the edge router of the IP access network for the upward traffic stream[[s]], the access network end device processing the ~~received~~ upward traffic stream[[s]] sent from one of the calling subscriber and the called subscriber as an upward traffic stream[[s]] without guaranteed QoS.

9. (Currently Amended) The method according to claim 2, wherein [[the]] network devices between ~~said access network end device and said~~ the edge router and the access network end device of the corresponding IP access network forward the downward traffic stream[[s]] according to the ~~priorities~~ priority of the downward traffic stream[[s]].

10. (Currently Amended) The method according to claim 5, further comprising: after the calling subscriber terminates the service, ~~if there are upward traffic streams, said~~ the edge router sending a QoS release command[[,]] to the access

network end device[[s]], and the access network end device deleting corresponding items of the stream classification table according to the QoS releaseparameters of said command.

11. (Currently Amended) The method according to claim 6, further comprising: after the calling subscriber terminates the service, if there are upward traffic streams, saidthe edge router sending a QoS release command[[,]] to the access network end device[[s]], and the access network end device deleting corresponding items of the stream classification table according to the QoS releaseparameters of said command.

12. (Currently Amended) The method according to claim 7, further comprising: after the calling subscriber terminates the service, if there are upward traffic streams, said the edge router sending a QoS release command[[,]] to the access network end device[[s]], and the access network end device deleting corresponding items of the stream classification table according to the QoS releaseparameters of said command.

13. (Currently Amended) The method according to claim 5, wherein managing bandwidth according to bandwidth parameters comprises: performing bandwidth limitation, by the access network end device, for the upward traffic stream matched with the items of the stream classification table according to the bandwidth parameters.